

## **AMENDMENTS TO THE CLAIMS**

The following listing of claims will replace all prior versions and listings of claims in the application.

### **LISTING OF CLAIMS**

1. – 11. (Cancelled)

12. (Currently Amended) An injector for injecting a fuel into a gas powered turbine, comprising:

a combustion chamber in which a volume of the fuel is combusted;

an oxidizer supply to supply a selected oxidizer to said combustion chamber;

a preheat section to heat the oxidizer to a first temperature;

an oxidizer pathway to provide the oxidizer at the first temperature to said combustion chamber;

an injector slot near said oxidizer pathway; and

a splash plate surface to spread the volume of the fuel in said injector slot;

wherein the volume of the fuel substantially mixes with the oxidizer from said oxidizer pathway prior to combusting.

13. (Currently Amended) The injector of claim 12, further comprising:  
an aperture through which the volume of the fuel is transferred from the  
fuel supply to the splash plate surface.

14. (Original) The injector of claim 13, wherein said injector slot has a slot  
width;  
wherein said aperture provides a hydraulic diameter of the selected fuel  
less than about 80% of said slot width.

15. (Currently Amended) The injector of claim 13, further comprising:  
an injector element defining at least said injector slot, said splash plate  
surface, and said aperture;  
wherein said aperture is provided in a portion of said injector element to  
provide a fuel to the injector slot and said splash plate surface.

16. (Currently Amended) The injector of Claim 15, wherein said injector slot  
defines at least a portion of said splash plate surface;  
wherein said aperture supplies fuel to said injector slot and at least a  
portion of said fuel engages said splash plate surface.

17. (Currently Amended) The injector of Claim 12, wherein said splash plate surface is operable to develop a sheet flow of fuel;

wherein injector slot provides the sheet flow of fuel into a stream of the oxidizer from said oxidizer pathway.

18. (Currently Amended) ~~The injector of Claim 12, further comprising:~~  
An injector for injecting a fuel into a gas powered turbine, comprising:  
a combustion chamber in which a volume of the fuel is combusted;  
an oxidizer supply to supply a selected oxidizer to said combustion  
chamber;  
a preheat section to heat the oxidizer to a first temperature;  
an oxidizer pathway to provide the oxidizer at the first temperature to said  
combustion chamber;  
an injector slot near said oxidizer pathway; and  
a splash surface to spread the volume of the fuel in said injector slot;  
wherein the volume of the fuel substantially mixes with the oxidizer from  
said oxidizer pathway prior to combusting; and  
an injector plate defining at least a portion of said oxidizer pathway.

19. (Original) The injector of Claim 18, further comprising:  
an injector face defined by said injector plate;  
an injector nose extending downstream of said injector face, such that the  
oxidizer flows past said injector nose.

20. (Original) The injector of Claim 19, wherein said injector nose includes an  
internal angle of about 4° to about 20°.

21. (Original) The injector of Claim 19, wherein said injector nose defines a plane that allows a flow of the oxidizer past said injector nose substantially turbulence free.

22. (Currently Amended) The injector of Claim 12, wherein said splash plate surface produces a sheet flow of the fuel and said injector slot directs said sheet flow of fuel into a stream of oxidizer emanating from said oxidizer pathway;

wherein said sheet of fuel substantially mixes with said stream of oxidizer before any portion of the fuel combusts.

23. (Original) The injector of Claim 12, wherein the fuel includes at least a first fuel and a second fuel, wherein said first fuel and said second fuel are different.

24. (Original) The injector of Claim 22, wherein the fuel includes a first fuel and a second fuel, wherein said second fuel is different from said fuel.

25. (Original) The injector of Claim 24, wherein said first fuel is at least one of hydrogen, methane, natural gas, Synthesis gas, and combinations thereof; and

said second fuel is at least one of a hydrogen, a methane, a Synthesis gas, a natural gas, in combinations thereof.

26. – 34. (Cancelled)

35. (New) An injector for injecting a selected fuel into a fluid stream, comprising:

- a fuel supply to supply the selected fuel;
- a splash surface to spread a selected volume of the selected fuel;
- an injector slot, having a slot width;
- an aperture to allow the volume of the selected fuel from the fuel supply to leave said injector slot;
- a combustion chamber in which fuel from the fuel supply is operable to be combusted;
- wherein said aperture provides a hydraulic diameter of the selected fuel in said injector slot less than about 80% of said slot width.

36. (New) The injector of Claim 35, wherein said slot width is greater than about 0.02 inches.

37. (New) The injector of Claim 35, further comprising an injector element defining a void to which the selected volume of the selected fuel is provided before being spread on said splash surface.

38. (New) The injector of Claim 37, wherein said injector element further defines said aperture near said injector slot;

- wherein said fuel is supplied from said void through said aperture to said injector slot in a substantially unitary structure.

39. (New) The injector of Claim 37, further comprising:  
a removable member operably sealing said void in a first selected position  
and removable to unseal said void;  
wherein said plug may be removed to obtain access to at least said  
aperture.

40. (New) The injector of Claim 35, further comprising:  
a nose portion extending downstream of said injector slot;  
wherein said nose portion of system directs a flow of a fluid.

41. (New) The injector of Claim 40, wherein said nose portion includes an  
internal half-angle of about 2° to about 20°.

42. (New) The injector of Claim 40, wherein said nose includes a planar  
portion defining a plane substantially perpendicular to a flow of a fluid past said nose;  
wherein said planar portion is operable to achieve a selected holding  
flame.

43. (New) The injector of Claim 35, further comprising:  
a coolant pathway;  
wherein said coolant pathway is operable to maintain a temperature of the  
injector during use.

44. (New) The injector of Claim 35, further comprising:  
an elongated member defining a plurality of said splash plates, a plurality of said injector slots, and a plurality of said apertures;  
wherein at least one of said plurality of said splash plates, said apertures, and said injectors define a single injector portion for injecting the fuel into a selected area.

45. (New) The injector of Claim 35, wherein said fuel supply is operable to supply at least one of hydrogen, methane, natural gas, Synthesis gas, and combinations thereof.

46. (New) The injector of Claim 12, wherein said injector slot includes a plurality of injector slots to form an elongated slot to spread the volume of fuel near a plurality of said oxidizer pathways.

47. (New) The injector of Claim 12, further comprising an injector nose extending near said splash surface; wherein an internal angle of the injector nose is about 4° to about 20°.